CLAIMS

1. A method for securing data transmissions in an internet-of-things (IoT) network comprising a plurality of IoT devices and an edge device, the method comprising:

obtaining, by a processor of an internet of things (IoT) data collection device of the plurality of IoT devices, a genomic differentiation object that is allocated to the IoT data collection device, wherein the plurality of IoT devices and the edge device are respectively allocated sufficiently correlated genomic differentiation objects;

obtaining, by the processor of the IoT data collection device, genomic regulation instructions (GRI) shared between the IoT device and the edge device, the GRI indicating a set of operations that are used to modify the genomic differentiation object when transmitting data to the edge device;

modifying, by the processor of the IoT device, the genomic differentiation object using the GRI to obtain a modified genomic differentiation object;

collecting, by the processor of the IoT device, IoT data relating to an environment or function of the IoT data collection device, wherein the IoT data is collectively contained in a set of digital objects that are to be transmitted to the edge device, each respective digital object including a payload and respective metadata corresponding to the respective digital object;

transforming, by the processor of the IoT device, the set of digital objects into a corresponding set of respective virtual binary language script (VBLS) objects each having a respective transformed payload and the respective metadata from the corresponding digital object from which the transformed payload was derived, wherein the respective payload of each respective digital object is transformed into the respective transformed payload of a corresponding VBLS object based on the modified genomic differentiation object, the GRI, and the respective metadata of respective digital object; and

transmitting, by the processor of the IoT device, the set of VBLS objects to the edge device.

2. The method of claim 1, wherein the edge device provides the GRI to the IoT device during a link exchange process.

3. The method of claim 1, wherein the IoT device is preconfigured with the GRI.

4. The method of claim 1, wherein the GRI is only shared between the edge device and the IoT device and not shared among any other IoT device of the plurality of IoT devices,

whereby none of the other IoT devices of the plurality of IoT devices can inverse transform the one or more VBLS objects to recreate the one or more digital objects.

5. The method of claim 1, wherein the GRI is shared among an enclave comprising the edge device and a subset of IoT devices of the plurality of IoT devices consisting of some but not all of the IoT devices of the plurality of IoT devices, whereby only the edge device and any other IoT device of the set of IoT devices can inverse transform the one or more VBLS objects to recreate the one or more digital objects using the GRI and the genomic differentiation object.

6. The method of claim 1, wherein the GRI is shared among all of the plurality of IoT devices, whereby the edge device and any other IoT device of the plurality of IoT devices can inverse transform the one or more VBLS objects to recreate the one or more digital objects using the GRI and the genomic differentiation object.

7. The method of claim 1, wherein the plurality of IoT devices comprise IoT sensors and the IoT data is sensor data.

8. The method of claim 1, wherein the plurality of IoT devices comprise one or more smart appliances.

9. The method of claim 1, wherein the plurality of IoT devices comprise one or more wearable devices.

10. The method of claim 1, wherein the IoT device communicates the one or more VBLS objects to the edge device over a WIFI network.

11. The method of claim 1, wherein the IoT device communicates the one or more VBLS objects to the edge device via a mesh network formed among the plurality of IoT devices.

12. The method of claim 1, further comprising:

receiving, by the edge device, the set of VBLS objects;

retrieving, by the edge device, a respective genomic differentiation object that is sufficiently correlated to the genomic differentiation object used by the IoT device to generate the set of VBLS objects;

retrieving, by the edge device, a copy of the GRI used by the IoT device to generate the set of VBLS objects;

modifying, by the edge device, the genomic differentiation object using the GRI to obtain a modified genomic differentiation object; and

for each respective VBLS object of the set of VBLS objects:

obtaining, by the edge device, a respective sequence that is extracted from respective metadata of the respective VBLS object;

generating, by the edge device, a respective genomic engagement factor based on the extracted sequence and the modified genomic differentiation object; and

inverse transforming, by the edge device, the VBLS object using the respective genomic engagement factor to recreate a corresponding digital object sent by the IoT collection device.

13. The method of claim 12, further comprising:

aggregating, by the edge device, respective IoT data collected from two or more of the IoT device to obtain aggregated IoT data;

generating, by the edge device, a second set of VBLS objects based on the aggregated IoT data, a genomic differentiation object that is sufficiently correlated with a respective genomic differentiation object stored by a cloud computing service, and second GRI exchanged with the cloud computing service; and

transmitting, by the edge device, the second set of VBLS objects to the cloud computing service.

14. The method of claim 13, wherein the genomic differentiation object used to generate the second set of VBLS objects by the edge device is the same genomic differentiation object used to decode the set of VBLS objects received from the IoT collection device.

15. The method of claim 13, wherein the genomic differentiation object used to generate the second set of VBLS objects by the edge device is different than the genomic differentiation object used to decode the set of VBLS objects received from the IoT collection device.